

REMARKS

Status of Application

Claims 1-5, 7-10, 12-15 and 17-20 were pending in this application. In the Office Action mailed May 4, 2009, claims 1-5, 7-10, 12-15 and 17-20 were rejected.

By this amendment, claims 10, 12, 13, 15 and 17-19 are pending as currently amended. Claims 1-5 and 7-9 are pending as previously presented. Claims 6, 11, 14, 16 and 20 are cancelled. No new matter is introduced by these amendments, which are fully supported by the specification.

Applicant requests consideration and allowance of claims 1-5, 7-10, 12, 13, 15 and 17-19.

Applicant reserves the right to prosecute any withdrawn, cancelled, or non-elected claims and/or subject matter in separate applications.

Specification

The specification was objected to for new matter “storage medium” and for correction of an incorporated reference. The specification has been amended. Thus, these objections can be withdrawn.

35 U.S.C. § 101 Rejections

Claims 10, 12-15 and 17-19 were rejected as not falling within a statutory category of invention. Applicants have amended claims 10, 12, 13, 15 and 17-19 to provide the appropriate transformation. Thus, these rejections can be withdrawn.

35 U.S.C. § 112 Rejection

Claim 20 was rejected as failing to comply with the written description requirement for use of the term “computer readable storage medium.” Claim 20 has been cancelled.

35 U.S.C. § 103(a) Rejections

Claims 1-5, 7-10, 12-15 and 17-20 were rejected as unpatentable under 35 U.S.C. § 103(a) over Hoffman et al. (“Biplane X-ray Angiograms, Intravascular Ultrasound, and 3D Visualization of Coronary Vessels,” Int’l J of Cardiac Imaging, Vol. 15, No. 6, pps. 495-512, 1999) in view of Yoshigahara et al. (U.S. 7,015,951). Applicants respectfully traverse the rejections of claims 1-5, 7-10, 12, 13, 15 and 17-19. Claims 14 and 20 have been cancelled.

To begin, in the “Response to Arguments,” the Examiner, responding to certain differences noted between Applicants’ claims and portions of the cited references, stated that these “limitations are not in the claims.” (See Office Action at page 18, lines 3-6) Applicants submit that these differences from the cited references relate to utilizing a “sum profile” for “constructive superimposition of the gray values of multiple epipolar lines and averaging out the contributions of other vascular segments.” Claims 1 and 10 have been amended to encompass these limitations. Applicants respectfully submit that claims 1-5, 7-10, 12, 13, 15 and 17-19 as amended are patentably distinct from the cited references for at least the reason that the cited references do not disclose or suggest all limitations of Applicants’ claimed invention.

Further, Applicants respectfully submit that Hoffman et al. in view of Yoshigahara et al. do not provide a *prima facie* case of obviousness of the claimed inventions because the Examiner has not shown that there would have been motivation for combining these references to achieve Applicants’ invention. In particular, Yoshigahara et al. disclose a brute force calculation of a “picture matching method” that requires calculations based on the entirety of the image. (See Yoshigahara et al. col. 6, lines 55-63 and Fig. 10, label ST13)

To the contrary, Applicants’ invention encompasses a more efficient method of using one or more user-selected interactive points in a single reference image and a sum profile generated only for the interactive points from a single reference image. There would have been insufficient motivation to use the sledgehammer calculation of Yoshigahara et al. to achieve the efficient interactive result of Applicants’ claimed inventions.

The Examiner stated that motivation to combine the cited references would have been found “in order to determine accurate positions of the space point by adding an interpolation process,” and “by going into a more detailed description of the epipolar line viewpoint

reconstruction steps.” (See Office Action at page 19, paragraph 13) Applicants respectfully submit that “an interpolation process” is nowhere mentioned in Applicants’ specification and is not a claimed limitation. Further, if Yoshigahara et al. provided “more detailed description,” then this merely suggests that Hoffman et al. was lacking in details. A suggested lack of detail is not a motivation to combine. Otherwise, motivation would exist to look at any reference, and the Examiner’s argument would vitiate the requirement to show motivation. Applicants respectfully submit that insufficient motivation would have existed to utilize the more complex schemes of Yoshigahara et al. when a goal of the claimed invention “was to provide means for the simpler and reliable reconstruction of a three-dimensional model of a spatial structure.” (See specification at page 2, lines 1-3)

Lastly, Applicants submit that for the same reasons as discussed above, dependent claims 2-5, 7-9, 12, 13, 15 and 17-19 are patentable over the cited references.

CONCLUSION

Applicants respectfully submit that claims 1-5, 7-10, 12, 13, 15 and 17-19 distinguish patentably from the references of record and are in condition for allowance.

Should any questions remain, Examiner is invited to telephone Applicants’ representative at the number provided.

Respectfully submitted,

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